Skvortsovia: 1(3): 248 – 256 (2014)

Skvortsovia

http://skvortsovia.uran.ru/

ISSN 2309-6497 (Print)

ISSN 2309-6500 (Online)

Article

New records of *Hieracium* (Asteraceae) from the boreal zone of European Russia

Alexander N. Sennikov[1,*] and Marina A. Golubeva[2]

[1]Botanical Museum, Finnish Museum of Natural History, P.O. Box 7, 00014 University of Helsinki, Finland; also at Herbarium, Komarov Botanical Institute of Russian Academy of Sciences, Prof. Popov str. 2, St. Petersburg 197376, Russia
[2]Ples State Museum and Reserve of History, Architecture and Art, Sobornaya Gora 1, Ples 155555, Ivanovo Region, Russia
*Corresponding author. Email: alexander.sennikov@helsinki.fi

Received: 28 May 2014 | Accepted by D. J. Nicholas Hind: 28 July 2014 | Published on line: 31 July 2014

Abstract

A number of new records in *Hieracium* (Asteraceae) from European Russia have been made in the course of examination of herbarium collections kept in the Ples State Museum and Reserve of History, Architecture and Art. *Hieracium diaphanoides*, *H. lepistoides*, *H. pellucidum* and *H. subpellucidum* are reported as new to Kirov Region; *H. morulum* is new to Vologda Region; *H. pellucidum* and *H. umbricola* are new to Kostroma Region; the latter is also new to central Russia as a whole. *H. sylvularum*, commonly naturalised in European Russia, is for the first time found in the town of Kostroma.

Keywords: apomictic species, Compositae, distribution, Kirov Region, Kostroma Region, Vologda Region

Introduction

Apomictic species of *Hieracium* L. (Asteraceae) in eastern European Russia, although included in the detailed treatment by Schljakov (1989), are still very imperfectly known. This is largely caused by a considerable undersampling of the genus, insufficiently represented in the large herbarium collections (LE, MW) that were available to the monographers in classical times. Collecting and publishing activity, much increased with the development of information and communication technologies in recent years (Kalinichenko *et al*., 2006), and active cooperation between monographers and field botanists, have allowed a dramatic improvement in our knowledge about the distribution of *Hieracium* species. This process is ongoing and very promising for the future.

A small but valuable collection is kept in the Ples State Museum and Reserve of History, Architecture and Art (PLES), amounting to over 7000 specimens. Although focused on Ivanovo Region, PLES also possesses significant holdings from Kostroma Region (Seregin and Scherbakov, 2006) and recent collecting activity has also brought in some material from

Kirov and Vologda Regions. The majority of specimens were collected by Marina Golubeva (PLES); this material was the basis of the present study.

The analysis of herbarium collections of PLES revealed a number of apomictic species of *Hieracium* not previously reported from particular administrative territories of European Russia. The records make significant extensions of distribution areas as circumscribed by Schljakov (1989).

Materials and methods

The collection of *Hieracium* kept in PLES (about 25 specimens) was identified and screened for new records. Other relevant collections kept in LE and Kirov Region Museum were also taken into consideration.

The records were evaluated against published sources: Sennikov (2006) and Sennikov and Novikov (2006) with additions in Sennikov (2009) for Central Russia, Orlova (1993) with additions in Sennikov (2009) for Vologda Region, and Tarasova (2007) for Kirov Region.

Taxonomy and species circumscriptions follow Hackman and Sennikov (1998) and Sennikov (2006, 2008). Nomenclature follows Sennikov (2002a).

New records

Hieracium diaphanoides Lindeb., Hier. Bidr.: 11. 1882.

Specimen examined: Eastern European Russia, Kirov Region: Oparino District, near Duvannoe, alder-fir forest with sparse spruce on the steep slope to Kuzyug River, rare, 04.07.2007, *M.Golubeva, A.Bobrov, E.Chemeris 54* (PLES).

Comments: New to Kirov Region. This species has an extensive distribution area, covering the whole of southern Fennoscandia up to the western part of Arkhangelsk Region (Samuelsson, 1954; Schljakov, 1989). Its former reports from Vologda Region (Orlova, 1993) and Komi Republic (Minyaev and Ulle, 1977) belong to the aggregate *H. diaphanoides* s.l., including *H. subpellucidum* Norrl. and *H. subarctoum* Norrl. Inferred from the frequent occurrence and abundant presence of the species in eastern Fennoscandia, its wider distribution in the east of European Russia is expected.

The present record makes a great extension of the distribution area eastwards. It is situated in the boreal zone at about the same latitude as St. Petersburg, ca. 600 km SE of the easternmost earlier records (Samuelsson, 1954).

The species is very similar to *H. subpellucidum*, from which it can be easily distinguished by the phyllaries lacking stellate hairs over the surface.

Hieracium lepistoides (Johanss. ex Dahlst.) Brenner, Acta Soc. Fauna Fl. Fenn. 13(1): 25. 1895 ≡ *Hieracium serratifrons* subsp. *lepistoides* Johanss. ex Dahlst., Kongl. Svenska Vetensk.-Akad. Handl. 25(3): 92. 1893.

= *Hieracium pseudolepistoides* Schljak. in Tzvelev, Fl. Evropeiskoi Chasti SSSR 8: 379. 1989.

Specimens examined: Eastern European Russia, Kirov Region: Podosinovets District, coniferous forest with deciduous trees on the steep slope of Pushma River upstream of Ananino, 05.07.2007, *M.Golubeva, A.Bobrov, E.Chemeris 42, 44* (PLES).

Comments: New to Kirov Region. This species is another widely distributed apomictic taxon covering nearly the whole of Fennoscandia except Lapland (Samuelsson, 1954). Its distribution area stretches eastwards as far as the northern Urals (Sennikov, 2002b). The species was re-described as *H. pseudolepistoides* Schljak. (Schljakov, 1989) from the western side of the northern Urals within the Komi Republic on account of its presumable isolation from the Fennoscandian part of the distribution area. Since then the presence of *H. lepistoides* in Komi was confirmed (Kucherov *et al*., 2002).

The species can be readily and unmistakably recognised by its leaves (subovate with small sharp teeth) and phyllaries (blackish, covered with black glandular hairs without stellate pubescence on the surface, apically with a coma of abundant straight fringes).

Hieracium morulum (Dahlst.) Dahlst., Herb. Hierac. Scand. 9: No. 42. 1895 ≡ *Hieracium serratifrons* subsp. *morulum* Dahlst., Kongl. Svenska Vetensk.-Akad. Handl. 25(3): 104. 1893.

= *Hieracium euryodon* Brenner, Meddeland. Soc. Fauna Fl. Fenn. 31: 152. 1906.

= *Hieracium lutulentum* Norrl. in Cajander, Melan Suomen Kasvio, ed. 5: 695. 1906.

= *Hieracium elimense* Schljak. in Tzvelev, Fl. Evropeiskoi Chasti SSSR 8: 379. 1989.

Specimens examined: Northern European Russia, Vologda Region: Kichmengsky Gorodok District, near Garazhi, pine forest with birch on the steep slope to Kichmenga River, rare, 06.07.2007, *M.Golubeva, A.Bobrov, E.Chemeris 55, 56* (PLES).

Comments: New to Vologda Region. This species, widely distributed in Sweden and Norway, was believed to be confined to those countries (Samuelsson, 1954) until Sennikov (2002b) merged some other taxa into it, namely *H. euryodon* Brenner from Finland, *H.*

lutulentum Norrl. from Russian Lapland, and *H. elimense* Schljak. from the northern Urals within Komi. In this circumscription *H. morulum* is another widespread apomictic species in northern Europe. Recently it was found also in the southernmost part of the northern Urals (Sennikov, 2002b), Karelia (Sennikov, 2008), the northern part of Leningrad Region and Tver Region (Sennikov, 2009).

As evident from the brownish-green colour of leaves and the blackish phyllaries with thin, long and black simple and glandular hairs, *H. morulum* is most likely a product of ancient hybridization of *Hieracium* sect. *Hieracium* with *Hieracium* sect. *Alpina* (Fries). F.N. Williams; for this reason this species is placed in the hybridogeneous section *Hieracium* sect. *Atrata* Sennikov (Sennikov, 2008). The species can be readily recognised by its peculiar pubescence and leaves resembling those of *H. murorum*, but having irregular blunt teeth, as in other hybrids with *H. alpinum* L.

Hieracium pellucidum Laest., Kongl. Svenska Vetensk.-Akad. Handl. 1824: 172. 1824.

Specimens examined: Eastern European Russia, Kirov region: Oparino district, near Duvannoe, pine forest with ground cover of mosses, sparse birch and spruce understory on the high side of Moloma River, 04.07.2007, *M.Golubeva, A.Bobrov, E.Chemeris 51, 52* (PLES). Central European Russia, Kostroma Region: Vokhma District, near Piter, moist mixed forest of birch, pine and spruce with *Oxalis acetosella* L. and *Vaccinium myrtillus* L. on the high side of Shubot River, rare, 30.06.2007, *M.Golubeva, A.Bobrov, E.Chemeris 23, 24, 26, 27* (PLES); Galich District, near Artischevo, northern side of Lake Galichskoe, spruce forest on a terrace along the lake side, 29.08.2013, *G.Konechnaya, P.Efimov, V.Kuropatkin, A.Leostrin* (LE).

Comments: New to Kirov and Kostroma Regions. This species is one of the most widely distributed and common apomictic taxa in *Hieracium*, ranging from Great Britain in the west (Samuelsson, 1954; Sell and Murrell, 2006; Tyler, 2014) to the foothills of the northern Urals in the east. Previously it was recorded from neighbouring territories: the Komi Republic (Kucherov *et al*., 2002) and Vologda Region (Sennikov, 2009).

Of the apomictic *Hieracium*, *H. pellucidum* is one of the easiest to recognise. It can be immediately distinguished by its oblong-ovate leaves with a single pair of prominent small teeth at the base, pale green and almost glabrous above, and its phyllaries with abundant glandular hairs usually crowded near the apex, a few simple hairs at the base and thin stellate pubescence along the margins.

Hieracium subpellucidum Norrl., Hier. Exs. 1: ind. 1888.

= *Hieracium fariniramum* (Ganesch. & Zahn) Üksip in Schischkin & Bobrov, Fl. SSSR 30: 264. 1960 ≡ *Hieracium vulgatum* subsp. *fariniramum* Ganesch. & Zahn, Trudy Pocv.-Bot. Eksped. Izsl. Kolon. Rajonov Aziatsk. Rossii 5: 151. 1912.

Specimens examined: Eastern European Russia, Kirov Region: Kumeny District, near Kumeny, spruce forest, 28.07.1926, Zubarev (Kirov Region Museum); Podosinovets District, coniferous forest with deciduous trees on the steep slope of Pushma River upstream of Ananino, 05.07.2007, *M.Golubeva, A.Bobrov, E.Chemeris 43* (PLES); Shabalino District, pine forest with spruce (*Oxalis acetosella*, *Vaccinium myrtillus*, green mosses) along Vetluga River downstream of Kuneevo, 02.07.2007, *M.Golubeva, A.Bobrov, E.Chemeris 49* (PLES).

Comments: New to Kirov Region. This species is absolutely common in the southern boreal zone of Fennoscandia (Samuelsson, 1954), reaching east as far as the eastern slopes of the Urals (Sennikov, 2002b). Further south it has long been known from Siberia up to the Yenisei River (Samuelsson, 1943) and Lake Baikal, though this early record has been commonly neglected in Russian publications (Üksip, 1960; Tupitzina, 2004) in favour of separation of the later synonym, *H. fariniramum* (Ganesch. & Zahn) Üksip.

The most prominent features of *H. subpellucidum* are its phyllaries with many glandular hairs and stellate pubescence on the surface, and its acute lanceolate leaves which are dark green and covered with sparse simple hairs on the upper side.

Hieracium sylvularum Jord. ex Boreau, Fl. Centre Fr., ed. 3, 2: 418. 1857.

= *Hieracium grandidens* Dahlst., Kongl. Svenska Vetensk.-Akad. Handl. 25(3): 126, 129. 1893.

Specimen examined: Central European Russia, Kostroma Region: Kostroma Town, the forest by the railway bridge, 19.07.1994, *L.Filimonov 30, 31* (PLES).

Comments: New to Kostroma Region. This is the most widespread, common and abundant apomictic species of *Hieracium* introduced to Scandinavia, Finland, Baltic Countries and Russia (Hylander, 1943; Sennikov, 2000, 2003a; Tyler, 2004). It was introduced to park areas as an ornamental plant mostly in the 19th century (Hylander, 1943). In central Russia the species has been known from Moscow and Moscow Region (Sennikov and Novikov, 2006), Ivanovo Region (Sennikov, 2003b), Vladimir Region (Seregin, 2009), Kaluga Region (Reshetnikova *et al*., 2010), and Mordovia (Sennikov *et al*., 2012).

Hieracium sylvularum was found in Kostroma at the southern border of the town, less than 1 km from the former Malyshkovo Estate, which was built in its current form in the 19th century by Gennady V. Kartsev (1826–1895), a member of a large Russian noble family that resided in Kostroma Region. This estate, not yet surveyed for *Hieracium*, appears to be the most likely source of introduction of *H. sylvularum* in Kostroma.

Hieracium sylvularum is highly conspicuous and can be immediately recognised by its basal leaves that are acute and oblong-ovate, with truncate to sagittate base, basally with a number of large coarse teeth, dark green and sparsely hairy above, and its phyllaries abundantly covered with long thin glandular hairs (without simple hairs).

The lectotype of *H. sylvularum* recently designated in the course of inventory of Alexis Jordan's *Hieracium* names (Gottschlich *et al*., 2011) shows a plant congruent with the current concept of the species as established by Zahn (1921: 311, fig. 28). The lectotype deviates slightly from the majority of plants labelled with this name by having basal leaves with a less coarse dentation at the base; the taxonomic significance of this deviation has not yet been ascertained.

Hieracium umbricola Saelan ex Norrl. in Saelan et al., Herb. Mus. Fenn., ed. 2, 1: 150, 111. 1889.

= *Hieracium coniops* auct. non Norrl.

Specimens examined: Central European Russia, Kostroma Region: Vokhma District, near Lazhborovitsa, pine forest with *Vaccinium vitis-idaea* L. and ground cover of mosses along the left bank of Nyuryug River, 30.06.2007, *M.Golubeva, A.Bobrov, E.Chemeris 16, 17* (PLES).

Comments: New to Kostroma Region and central Russia as a whole. This species is a taxonomic challenge; it has long been confused or combined with the similar *H. coniops* Norrl. (e.g. Norrlin, 1906; Samuelsson, 1954; Üksip, 1960; Schljakov, 1989) but sometimes recognised as a separate species (Hackman and Sennikov, 1998). In a broader circumscription *H. coniops* s.l. is another widespread and common species in the boreal zone of Fennoscandia (Samuelsson, 1954), and a wider range of *H. umbricola* in the north of East Europe has been expected. The present record extends the distribution area of *H. umbricola* by ca. 600 km eastwards.

The species can be recognised by its subglaucous leaves, which are nearly glabrous and light plumbeous on the upper side, by its phyllaries with sparse simple and short glandular hairs

situated along a narrow median line, and by its synflorescence branches that are nearly lacking simple and glandular hairs (rarely with solitary glandular hairs ca. 0.2 mm long). More detailed information about the diagnostic characters and distribution areas of *H. coniops* s. str. and *H. umbricola* will be provided elsewhere.

Acknowledgements

The authors thank anonymous reviewers and the editor for their useful comments, Elena Tarasova (Kirov) who kindly provided *Hieracium* specimens from Kirov Region Museum for examination and Alexander Bobrov (Borok) who organized the field work.

References

Gottschlich, G., Tison, J.-M., Malecot, V. and Rouillard, T. 2011. Typification of names in genus *Hieracium* based on original herbarium material of Alexis Jordan and Alexandre Boreau. Forum Geobot. 5: 1–107.

Hackman, W. and Sennikov, A.N. 1998. *Hieracium* L. (s. str.) – ukonkeltanot. In: Hämet Ahti, L., Suominen, J., Ulvinen, T. and Uotila, P. (eds.), Retkeilykasvio (Field Flora of Finland). Ed. 4. Helsinki: Luonnontieteellinen keskusmuseo, Kasvimuseo: 466–479.

Hylander, N. 1943. Die Grassameneinkömmlinge schwedischer Parke mit besonderer Berücksichtigung der *Hieracia silvaticiformia*. Symb. Bot. Upsal. 7(1): I–XIII + 1–432, Taf. I–XXIV.

Kalinichenko, I.M., Novikov, V.S. and Scherbakov, A.V. 2006. Flora of Central Russia: Annotated bibliography. Suppl. 2. Moscow: KMK Scientific Press. (In Russian)

Kucherov, I.B., Ulle, Z.G., Bezgodov, A.G. and Sennikov, A.N. 2002. Floristic records in the upper reaches of Pechora River (Pechora-Ilych nature reserve). Bot. Zhurn. (Moscow & Leningrad) 87(2): 98–112. (In Russian)

Minyaev, N.A. and Ulle, Z.G. 1977. *Hieracium* L. In: Tolmachev, A.I. (ed.), Flora of the northeast of the European part of the USSR 4. Leningrad: Science Publishers: 220–235. (In Russian)

Norrlin J.P. 1906. Suomen Keltanot. In: Cajander, A.K., A.J. Melan Suomen Kasvio. Ed. 5. Helsinki: Suomalaisen Kirjallisuuden Seura: 613–746.

Orlova, N.I. 1993. Checklist of the flora of Vologda Region. Vascular plants. Trudy S.-Peterburgsk. Obshch. Estestvoisp. 77(3): 1–261. (In Russian)

Reshetnikova, N.M., Mayorov, S.R., Skvortsov, A.K., Krylov, A.V., Voronkina, N.V., Popchenko, M.I. and Shmytov, A.A. 2010. Flora of Kaluga Region. An annotated list of vascular plants of the Kaluga Region. Moscow: KMK Scientific Press. (In Russian)

Samuelsson, G. 1943. Die Verbreitung der *Alchemilla*-Arten aus der *Vulgaris*-Gruppe in Nordeuropa (Fennoskandien und Dänemark). Acta Phytogeogr. Suec. 16: 1–159.

Samuelsson, G. 1954. Maps of a selection of Scandinavian *Hieracium* species. Kongl. Svenska Vetensk. Akad. Handl. (ser. 4) 5(3): 1–10, maps 1–123.

Schljakov, R.N. 1989. *Hieracium* L., *Pilosella* Hill. – In: Tzvelev, N.N. (ed.), Flora of the European part of the USSR 7. Leningrad: Science Publishers: 140–379. (In Russian)

Sell, P. and Murrell, G. 2006. Flora of Great Britain and Ireland 4. Cambridge: Cambridge University Press.

Sennikov, A.N. 2000. *Hieracium* L., *Pilosella* Hill. In: Tzvelev, N.N., Manual of the vascular plants of North-West Russia (Leningrad, Pskov and Novgorod regions). St. Petersburg: St. Petersburg State Chemical-Pharmaceutical Academy Press: 655–671, 681. (In Russian)

Sennikov, A.N. 2002a. Bibliographic catalogue of *Hieracium* and *Pilosella* names published by Finnish authors. Norrlinia 9: 1–109.

Sennikov, A.N. 2002b. New records of *Hieracium* (Asteraceae) in the Urals and West Siberia. Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 107(6): 69–71. (In Russian)

Sennikov, A.N. 2003a. *Hieracium* L. In: Kuusk, V., Tabaka, L. and Jankevičienė, R. (eds.), Flora of the Baltic countries. Compendium of vascular plants 3. Tartu: Institute of zoology and botany: 103–144. (In English and Russian)

Sennikov, A.N. 2003b. New records of *Hieracium* (Asteraceae) in East Europe. Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 108 (6): 56–57. (In Russian)

Sennikov, A.N. 2006. *Hieracium* s. str. (Asteraceae) in Central Russia. In: Novikov, V.S., Notov, A.A. and Scherbakov, A.V. (eds.), Floristic studies in Central Russia. Proceedings of the 6th scientific conference on the flora of Central Russia (Tver, 15–16 April 2006). Moscow: KMK Scientific Press: 138–141. (In Russian)

Sennikov, A.N. 2008. *Hieracium* L. In: Kravchenko, A.V., A Compendium of Karelian Flora (Vascular Plants). Petrozavodsk: Karelian Branch of Russian Academy of Sciences: 252–257. (In Russian)

Sennikov, A.N. 2009. New records of *Hieracium* L. (Asteraceae) in European Russia. Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 114(6): 59–61. (In Russian)

Sennikov, A.N. and Novikov, V.S. 2006. *Hieracium* L. In: Elenevsky, A.G. *et al*. (eds.), Mayevsky's Flora of Central Russia. Ed. 10. Moscow: KMK Scientific Press: 537–540. (In Russian)

Sennikov, A.N., Silaeva, T.B. and Khapugin, A.A. 2012. A checklist of the genus *Hieracium* (Asteraceae) in the Republic of Mordovia. Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 117(6): 77–78. (In Russian)

Seregin, A.P. 2009. Some species new to or rare in the Vladimir Region, 5. Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 114(6): 62–64. (In Russian)

Seregin, A.P. and Scherbakov, A.V. 2006. Main herbarium collections relevant to the flora of Central Russia. In: Kalinichenko, I.M., Novikov, V.S. and Scherbakov, A.V., Flora of Central Russia: Annotated bibliography. Suppl. 2. Moscow: KMK Scientific Press: 60–71. (In Russian)

Tarasova, E.M. 2007. Flora of the Vyatka Region, 1. Vascular plants. Kirov: Vyatka State University etc. (In Russian)

Tupitzina, N.N. 2004. The hawkweeds of Siberia. Novosibirsk: Science Publishers. (In Russian)

Tyler, T. 2004. Reevaluation of the species of *Hieracium* sect. *Hieracium* that were described by Hylander from introduced populations in Scandinavian parks. Ann. Bot. Fenn. 41(2): 103–131.

Tyler, T. 2014. Critical notes on species of *Hieracium* (Asteraceae) reported as common to Sweden and Britain. New J. Bot. 4(1): 25–32.

Üksip, A. 1960. *Hieracium* L. In: Schischkin, B.K. and Bobrov, E.G. (eds.), Flora of the USSR 30. Moscow and Leningrad: Academy of Sciences of the USSR: 1–732. (In Russian)

Zahn, K.H. 1921. Compositae – *Hieracium*. Sect. VII. Vulgata (Fortsetzung und Schluβ) – Sect. X. Pannosa (Anfang). In: Engler, A. (ed.), Das Pflanzenreich. Regni vegetabilis conspectus 76. Leipzig: W. Engelmann: 289–576.